BST Doorphone Installation and Configuration Guide

BCM

Business Communications Manager

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Chapter 1
About the Business Series Terminal (BST) Doorphone

This guide leads a Nortel installer and/or system administrator through installing and configuring a BST Doorphone on a Business Communications Manager (BCM) system.

The BST Doorphone is used as an intercom device to control access to your building. It provides call notification and handsfree communication from a site entry location to assigned telephones on the BCM system.

Note: Door opening capabilities are available with a Door Opening Controller (DOC). For more information on DOC, refer to "Optional Equipment" on page 13.

This chapter contains:

- "What you need to know"
- "Environment requirements"
- "How to get help"

What you need to know

To install and configure a BST Doorphone you must:

- know how to log on to Element Manager and use the Element Manager interface
- be a Nortel installer with Business Communications Manager certification
- know basic Nortel terminology

Environment requirements

Check the following environment requirements:

Temperature	-35° to 60°C (-31° – 140°F)
Relative humidity	5% to 95% non-condensing
Background noise	up to 70 dB A

How to get help

This section explains how to get help for Nortel products and services.

Getting Help from the Nortel Web site

The best way to get technical support for Nortel products is from the Nortel Technical Support Web site:

http://www.nortel.com/support

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. More specifically, the site enables you to:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting Help over the phone from a Nortel Solutions Center

If you don't find the information you require on the Nortel Technical Support Web site, and have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following Web site to obtain the phone number for your region:

http://www.nortel.com/callus

Getting Help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

http://www.nortel.com/erc

Getting Help through a Nortel distributor or reseller

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

Chapter 2
DN configuration requirements for the BST Doorphone

You can set up the DN record prior to a hardware installation, or you can install the hardware before you configure the DN record. If you install the hardware first, Element Manager will automatically detect the BST Doorphone and list it in the Active DNs table.

Note: Some default DN settings can cause the BST Doorphone to automatically answer incoming calls that are not intended to be heard over the BST Doorphone. For detailed information about all DN settings, refer to your BCM Configuration Guide.

Creating a BST Doorphone DN record

Follow these steps to create a DN record for the BST Doorphone.

1 From Element Manager, click the **Configuration** tab and select **Telephony > Sets > All DNs**.

2 The **All DNs** panel contains three tabs: **Line Access**, **Capabilities and Preferences**, and **Restrictions**. Depending on which tab is selected, different fields appear in the main panel and the details panels. The **All DNs** pane displays the parameters shown in the table below regardless of what tab is selected. Use Table 1 to set the values for the BST Doorphone.

Table 1 Static information on the main panel

Attribute	Value	Description
Name	<up to seven alphanumeric characters>	Use this field to provide a more specific description of the BST Doorphone, such as BackDR for Back Door.
Model Port	Doorphone	Choose Doorphone for the BST Doorphone.
	<port number>	This read-only field shows the port number for the Set DN. Remember this port number when you are installing the BST Doorphone to a station module on the BCM system.

3 Select the **Line Access** tab and select the DN. Three tabs display in the details panel. You must set parameters in the main panel and under the following tabs:

- Line Assignment
- Line Pool Access
- Answer DNs

Use Table 2 to set line access parameters for the BST Doorphone.

Table 2 Line access parameters

Tab	Attribute	Values	Description
Main panel	Fwd No Answer	up to 24 digits	Leave blank for the BST Doorphone.
	Fwd Busy	up to 24 digits	Leave blank for the BST Doorphone.
Line Assignment	Line	read only	Ensure there is no line assignment for this DN.
Line Pool Access	Line Pool	read only	Ensure that no line pool access is selected for this DN.
Answer DNs	DN	DN number	Ensure that there are no Answer DN assignments for the BST Doorphone.

4 Select the **Capabilities and Preferences** tab and select the DN. Additional tabs display in the details panel. You must set parameters in the main panel and under the following tabs:

- Capabilities
- Preferences

Use Table 3 to set the capabilities and preferences for the BST Doorphone.

5 Repeat these steps for every BST Doorphone you plan to install on the system.

Table 3 Capabilities and preferences

Tab	Attribute	Values	Description
Main panel	Prime line	I/C	Ensure that the prime line value is set to **I/C** for the BST Doorphone.
	Intercom (I/C) keys	1	Assign only one intercom key to the BST Doorphone.
	Control set	None	Set this value to **None** for the BST Doorphone.
Capabilities	DND on busy	check box	Ensure that this check box is not selected for the BST Doorphone.
	Handsfree	None Standard Auto	Set this value to **Auto** for the BST Doorphone.
	Paging	check box	Ensure that this check box is selected for the BST Doorphone.
	Direct dial	0 - 9	Set this value to **0** for the BST Doorphone.
Preferences	Aux ringer	check box	Ensure that this check box is not selected for the BST Doorphone.
	Hotline type	None Internal External	Ensure that the Hotline type is sent to **None**.
	Note: For a detailed explanation on all line access fields, refer to your BCM Configuration Guide.		

Other BST Doorphone configuration requirements

You must configure the Trunk/line data and Scheduled Services for the BST Doorphone to work properly.

Trunk/line data

Ensure that the BST Doorphone DN (DN XXX) is not assigned as a prime set for lines on the BCM system.

The Element Manager displays all active lines under:
Configuration > Telephony > **Lines > Active Physical Lines** headings.

Scheduled Services

Ensure that the BST Doorphone DN (DN XXX) is not assigned as a control set, extra dial set or a ringing set for scheduled services.

The Element Manager displays three services (ringing, restrictions and routing) under:
Configuration > Telephony > **Scheduled Services** headings.

Chapter 3
BST Doorphone Installation

The BST Doorphone can be mounted in a standard recessed double-gang electrical box for flush mounting or surface mounted using the optional surface mount bracket. Mount the BST Doorphone at shoulder height (approximately 5 ft.) in the absence of other specifications, such as compliance with local handicapped access regulations, if required.

Select a location for the BST Doorphone within 300 m (1000 ft.) of the BCM system. This distance can be increased to 780 m (2600 ft.) with the connection of a Station Auxiliary Power Supply (SAPS) to a BST Doorphone.

The BST Doorphone is suitable for exposure to weather; however, care must be taken to ensure holes or recesses provided for the BST Doorphone are properly sealed to prevent water from entering the wall in exposed locations. Gaskets are supplied for both flush and wall mount installations. No gasket is required between the BST Doorphone and surface mount bracket.

Caution: You must install protection devices when wiring between the BST Doorphone and the BCM system is routed outside a building, such as aerial or buried cable. Protection devices must be installed at each end of the exposed cable. Nortel recommends the ITW LINX MP1A-90-27 secondary protector for this purpose.

Wire and mount a BST Doorphone

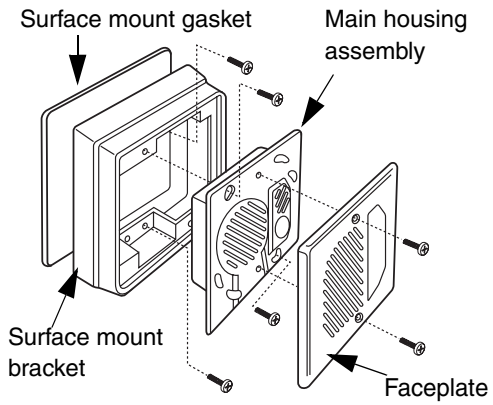
1. Remove the BST Doorphone's faceplate.
2. Determine if you want a flush or surface mount installation.

   For a surface mount:

   - Discard the flush mount gasket.
   - Verify the correct orientation of the surface mount gasket.
   - Thread the wires through the center hole, then through the surface mount bracket.
   - Fasten the surface mount bracket at the desired location on the wall.

   OR

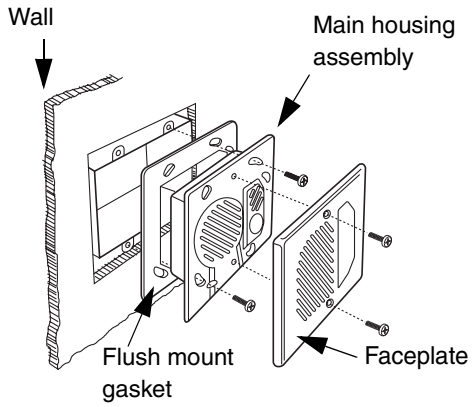
Figure 1 Surface mount



For a flush mount:
(into an electrical box embedded in the wall)

- Discard the surface mount gasket and bracket.
- Slide the flush mount gasket onto the main housing assembly.

Figure 2 Flush mount



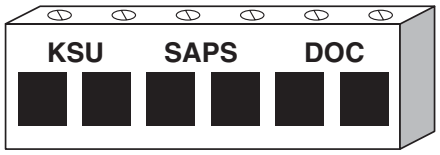
3 Run a standard 3-pair cable from the BCM system to the BST Doorphone location.

Use one pair to connect the "KSU" terminals of the BST Doorphone to a reserved station module port on the BCM system.

Strip wires 6 mm (1/4 inch) before inserting them in the terminal block and tightening.

The second pair can be used to connect an optional DOC, leaving a spare pair for a SAPS installation. For more information on DOC, refer to Optional Equipment on page 13.

Figure 3 BST Doorphone TCM connector screw block



Note: BST Doorphone connections are polarity insensitive.

4 Fasten the BST Doorphone's faceplate to the main housing assembly.

Note: When the surface mount bracket is used, secure the wiring with a cable tie through the round holes in the rear of the surface mount bracket or electrical box (customer supplied), before fastening the BST Doorphone's faceplate to the main housing assembly.

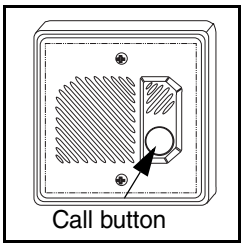
Initialize a new BST Doorphone

The system automatically recognizes the BST Doorphone once it is installed and connected. Use the following commands, to refresh the Element Manager view in order for the BST Doorphone to appear in the Active Sets panel.

- In Element Manager, click on the IP address in the **Network Elements** pane. Go to the top menu and select **View > Refresh**. Element Manager refreshes and the allows BST Doorphones to appear in the system.

  The BST Doorphone will identify itself to the system as a Doorphone.

Note: The Call button's backlight automatically turns on when the BST Doorphone is connected to a station module port on the system. The backlight is useful in low light conditions.



Optional Equipment

The Door Opening Controller (DOC) operates through a BST Doorphone to provide door opening control. The DOC receives data from the BST Doorphone, that is compared against a dip-switch set code for activation.

The DOC provides convenient control of locked mechanisms but is not intended for sole building entry security. In high security environments, backup systems should be used for added protection. Power failure, device failure, wiring faults and unauthorized equipment access can all contribute to a failed locked or unlocked situation.

For more information on the DOC, refer to documentation provided with the DOC unit.

Chapter 4
Configuring BST Doorphone settings

Doorphone programming allows you to customize feature settings for individual BST Doorphones on the BCM system.

Follow these steps to configure Doorphone settings:

1 From Element Manager, click on the **Configuration** tab and select **Telephony** > **Sets** > **Active Sets.**

Note: A maximum of 250 BST Doorphones can be attached to the BCM system.

2 Click on the Doorphone you want to program (for example, **Doorphone 1**) and select the **Capabilities and Preferences** tab.

3 Select the **Preferences** tab from the details panel, and set the Dialing Options to **Standard dial**.

4 Select the **Doorphone Settings** tab from the details panel.

5 Use the information in Table 4 to change the Doorphone settings.

6 Repeat these steps for each BST Doorphone installed on the system.

Table 4 BST Doorphone settings (Sheet 1 of 2)

Setting	Values	Description
Doorphone state	Active	This read-only field indicates if the Doorphone is detected on the system and is operational.
Speaker volume	Low Medium High	Assign a volume level for the Doorphone speaker.
Chime volume	Low Medium High	Assign a volume level for chime tones played during a Doorphone page.
Call Action	Ring Set Page Both	Select a call activity when the Doorphone Call button is pressed. **Ring Set**: Calls an internal telephone. **Page**: Sends a page tone to a specific group of telephones in a page zone. **Both**: Calls an internal telephone. If the call is not answered after a set length of time, a page tone is sent to a specific group of telephones in a page zone.
Target DN	< any telephone DN>	Enter the DN number of the internal telephone to call when the Doorphone's Call button is pressed.
Ring Delay	1 to 60 seconds	Select a set length of time (in seconds) to allow ringing at the Target DN before the call is automatically disconnected.

Table 4 BST Doorphone settings (Sheet 2 of 2)

Setting	Values	Description
Page Target	Internal External Both	**Internal**: Make a page announcement to a specific group of telephones in a page zone, through the telephone speakers. **External**: Make a page announcement through an external loudspeaker system. **Both**: Make a page announcement through telephone speakers and an external loudspeaker system.
Page Zone	Zone (1 to 6) All	Assign Doorphone paging to one of six page zones. Select **All** to assign Doorphone paging to all six page zones.
Chime Sequence	1 to 4 None Custom	During a Doorphone page, a page tone will be heard followed by the distinctive chime. Select one of four standard distinctive chimes. Select **None** to have no chimes presented during a Doorphone page (only a page tone will be heard) Select **Custom** for an unique chime setting. You must enter a custom chime sequence in the Custom Chime setting.
Custom Chime	< 0 to 8 digit string>	Allows you to create your own chime tune using the following parameters: 0 to 4 - chime tone (pitch) increases by number 5 = silence
Opener Type	DOC None	Allows you to specify if a Door Opening Controller (DOC) is connected to the Doorphone.
Open Digit	0 - 9, * or # < one-digit code>	The Open digit setting allows you to specify a single digit code to unlock a door or gate when a DOC is connected to the Doorphone.
	Note: The Open digit setting must match the dip-switch set code on the DOC. For more information on DOC, refer to Optional Equipment on page 13.	
Hardware ID	<10 character string>	This read-only field that shows the hardware identification number assigned to the Doorphone.

Testing the BST Doorphone

You can perform the following tasks to test the Doorphone settings:

- Press the Call button on the BST Doorphone and ensure the Target DN telephone rings.
- Let the Target DN telephone ring until the call is automatically disconnected. Ensure that a page tone followed by the Doorphone's distinctive chime is heard at specified telephones included in the Doorphone's page zone.
- To establish a voice path, dial the BST Doorphone's DN from any telephone on the system, or press the Call button on the BST Doorphone and answer the ringing call at the Target DN telephone.
- If installed, test the DOC as shown below:
  - — Press the Call button on the BST Doorphone and answer the call at the Target DN telephone.

— To open the door, dial the single digit code (specified in Doorphone programming) or on a two-line display telephone, press the OPEN display button.

— Press the release button or hang up to end the test.

Doorphone configuration tips

- The Doorphone's Target DN telephone should be assigned to the same page zone that is used by the Doorphone for paging (chime presentation).
- The Doorphone can ring several telephones on the system using Answer DNs. Program one or more telephones to have a Ringing Answer button for the Target DN telephone.
  — For example, the Target DN telephone is DN 230. Assign DN 230 as an Answer DN for extensions 223, 224 and 225. When the BST Doorphone Call button is pressed, four telephones on the system will ring (telephones: 230, 222, 223 and 225).

For more information on Answer DNs and assigning telephones to page zones, refer to your BCM Configuration Guide.